UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,782	06/07/2001	Christina Banta	US010388	8851

24737 7590 12/09/2008
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER	
COBANOGLU, DILEK B	
ART UNIT	**PAPER NUMBER**
3626	

MAIL DATE	DELIVERY MODE
12/09/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/876,782
Filing Date: June 07, 2001
Appellant(s): BANTA ET AL.

Adam M. Schoen
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 08/28/2007 appealing from the Office action mailed 05/16/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

NEW GROUND(S) OF REJECTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 9 and 25 are rejected under 35 U.S.C. 101 for being directed to a non-statutory subject matter because the claimed subject matter failed the machine-or-transformation test. Based on Supreme Court precedent (Diamond v. Diehr, 450 U.S. 175, 184 (1981); Parker v. Flook, 437 U.S. 584, 588 n.9 (1978); Gottschalk v. Benson, 409 U.S. 63, 70 (1972); Cochrane v. Deener, 94 U.S. 780, 787-88 (1876)) and recent Federal Circuit decisions, 101 process must (1) be tied to another statutory class (such as a particular apparatus) or (2)

transform underlying subject matter (such as article or materials) to a different state or thing (Gottschalk v. Benson, 409 U.S. 63, 70 (1972)).

With respect to Claims 1, 9 and 25, the claim language does not include the required tie in the body of the claim or transformation that would provide the application of the test to the claim to reach the conclusion of nonstatutory subject matter.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,546,580 Seliger et al. 8-1996

Applicant's admitted prior art.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 9 and 25 are rejected under 35 U.S.C. 101 for being directed to a non-statutory subject matter because the claimed subject matter failed the machine-or-transformation test. Based on Supreme Court precedent (Diamond v. Diehr, 450 U.S. 175, 184 (1981); Parker v. Flook, 437 U.S. 584, 588 n.9 (1978); Gottschalk v. Benson, 409 U.S. 63, 70 (1972); Cochrane v. Deener, 94 U.S. 780, 787-88 (1876)) and recent Federal Circuit decisions, 101 process must (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as article or materials) to a different state or thing (Gottschalk v. Benson, 409 U.S. 63, 70 (1972)).

With respect to Claims 1, 9 and 25, the claim language does not include the required tie in the body of the claim or transformation that would provide the application of the test to the claim to reach the conclusion of nonstatutory subject matter.

Claims 1, 9 and 25 do not recite a particular apparatus, therefore are rejected under 35 U.S.C. 101, for reciting a non-statutory subject matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-15, 17-24 and 27-28 are rejected under 35 U.S.C. 102(b) as being unpatentable by Seliger et al. (U.S. Patent No. 5,546,580).

As per claim 1, Seliger et al. discloses a computer-implemented study merging method, comprising merging a patient's first medical study with a logically related or similar second medical study to create a composite study (Seliger et al.; col.3, lines 6-23) and, reconciling study identifiers of the first and second medical studies (Seliger et al.; col.11, lines 56-67 and col. 12, lines 20-30), wherein said merging includes an automatic adding of medical information, according to a protocol attribute, of the first or second medical study into the other medical study in the creating of said composite study (Seliger et al.; col.5, lines 39-42 and col. 12, lines 7-31).

As per claim 2, Seliger et al. discloses the study merging method of claim 1, wherein the medical information is at least one of medical images, patient measurements, findings, comments, waveforms, Doppler audio, and a medical study report (Seliger et al.; col.3, lines 6-8).

As per claim 3, Seliger et al. discloses the study merging method of claim 2, further comprising computing patient measurement information of the first medical study based on the patient measurements in the second medical study, upon said merging (Seliger et al.; col. 11, lines 56-67, col. 12, lines 7-12 and col.12, lines 56-65).

As per claim 4, Seliger et al. discloses the study merging method of claim 1, wherein adding comprises adding stage information of the second medical study to the first medical study according to a protocol attribute of the second medical study (Seliger et al.; col.12, lines 1-6).Examiner understands stage information as information obtained or measured in time intervals or at different stages according to the applicant's specifications, paragraph (0032); therefore examiner considers "changes since the last update" as a stage information.

As per claim 6, Seliger et al. discloses the study merging method of claim 1, wherein said adding comprises adding a series instance identifier, for a series of the second medical study, to the first medical study without generating a new series instance identifier in the first medical study for said series of the second medical study (; col. 12, lines 1-31).

As per claim 7, Seliger et al. discloses the study merging method of claim 1, wherein said adding comprises adding new medical information of the second medical study to the composite study based on the new medical information including a study identifier of the second medical study (Seliger et al.; col.12, lines 17-19 and col.11, lines 59-61).

As per claim 8, Seliger et al. discloses the study merging method of claim 1, further comprising identifying the first and second medical studies, (Seliger et al.; col.3, lines 8-18) wherein said merging is initiated from a terminal remote from a storage unit containing either of the first and second medical studies (Seliger et al.; col.12, line 65 to col13, line 2).

As per claim 9, Seliger et al. discloses a computer-implemented study merging method, comprising merging a patient's first medical study with a logically related or similar second

medical study to create a merged study, (Seliger et al.; col.3, lines 6-8, and col. 12, lines 7-31), such that medically context-specific information stored in at least one of the first and second medical studies is merged based upon a protocol of at least one of the first and second studies, the protocol being indicated by an attribute of at least one of the first and second studies: (Seliger et al.; col.12, lines 1-6) saving respective identifiers of the first and second studies (col. 12, lines 1-31): deleting a distinct database identity for at least one of the first and second studies (col. 12, lines 1-31): and assigning a unique study identifier to the merged study (col. 12, lines 1-31).

As per claim 10, Seliger et al. discloses the study merging method of claim 9, wherein the medically context-specific information is stage information (Seliger et al.; col.5, lines 16-17).

As per claim 11, Seliger et al. discloses the study merging method of claim 9, wherein the medically context-specific information is measurement information (Seliger et al.; col.2, lines 3-7).

As per claim 12, Seliger et al. discloses a computer program product comprising a computer readable medium in which is embodied a program having instructions executable by a computer to perform acts, said acts comprising: merging a patient's first medical study with a logically related or similar second medical study to create a composite study (Seliger et al.; col.3, lines 6-23) and, reconciling study identifiers of the first and second medical studies (Seliger et al.; col.11, lines 56-67 and col. 12, lines 20-30), wherein said merging includes an automatic adding of medical information, according to a protocol attribute, of the first or second medical study into the other medical study in the creating of said composite study (Seliger et al.; col.5, lines 39-42 and col. 12, lines 7-31).

As per claim 13, Seliger et al. discloses the computer program product of claim 12, wherein the medical information is at least one of medical images, patient measurements,

findings, comments, waveforms, Doppler audio, and a medical study report (Seliger et al.; col.3, lines 6-8).

As per claim 14, Seliger et al. discloses the computer program product of claim 13, wherein said automatic adding comprises computing patient measurement information of the first medical study based on the patient measurements in the second medical study, upon said merging (Seliger et al.; col. 11, lines 56-67, col. 12, lines 7-12 and col.12, lines 56-65).

As per claim 15, Seliger et al. discloses the computer program product of claim 12, wherein adding comprises adding stage information of the second medical study to the first medical study according to a protocol attribute of the second medical study, upon said merging (Seliger et al.; col.12, lines 1-6). Examiner understands stage information as information obtained or measured in time intervals or at different stages according to the applicant's specifications, paragraph (0032); therefore examiner considers "changes since the last update" as a stage information.

As per claim 17, Seliger et al. discloses the computer program product of claim 12, wherein said automatic adding comprises adding a series instance identifier, for a series of the second medical study, to the first medical study without generating a new series instance identifier in the first medical study for said series of the second medical study (; col. 12, lines 1-31).

As per claim 18, Seliger et al. discloses the computer program product of claim 12, wherein said automatic adding comprises adding new medical information of the second medical study to the composite study based on the new medical information including a study identifier of the second medical study (Seliger et al.; col.12, lines 17-19 and col.11, lines 59-61).

As per claim 19, Seliger et al. discloses the computer program product of claim 18, wherein said acts further comprise controlling the computer to notify a user when said adding of the new medical information is performed (; abstract, col. 3, lines 29-39).

As per claim 20, Seliger et al. discloses the computer program product of claim 12, further comprising controlling the computer to delete a distinct database identity of the second medical study (; col. 6, lines 44-59, col. 11, lines 56-65, col. 12, lines 1-31, figures 3-5).

As per claim 21, Seliger et al. discloses the computer program product of claim 12, further comprise controlling the computer to identify the first and second medical studies, wherein said merging is initiated from a terminal remote from a storage unit containing either of the first and second medical studies (; col. 4, lines 35-63).

As per claim 22, Seliger et al. discloses a computer program product comprising a computer readable medium in which is embodied a program having instructions executable by a computer to perform acts, said acts comprising: merging a patient's first medical study with a logically related or similar second medical study to create a merged study, such that medically context-specific information stored in at least one of the first and second medical studies is merged based upon a protocol of at least one of the first and second studies, the protocol being indicated by an attribute of at least one of the first and second studies (Seliger et al.; col.3, lines 6-23), saving respective identifiers of the first and second medical studies (Seliger et al.; col.11, lines 56-67 and col. 12, lines 20-30), deleting a distinct database identity for at least one of the first and second studies (; col. 6, lines 44-59, col. 11, lines 56-65, col. 12, lines 1-31, figures 3-5) and assigning a unique study identifier to the merged study (; col. 8, lines 36-55).

As per claim 23, Seliger et al. discloses the computer program product of claim 22, wherein the medically context-specific information is stage information (Seliger et al.; col.12, lines 1-6).Examiner understands stage information as information obtained or measured in time

intervals or at different stages according to the applicant's specifications, paragraph (0032); therefore examiner considers "changes since the last update" as a stage information.

As per claim 24, Seliger et al. discloses the computer program product of claim 22, wherein the medically context-specific information is measurement information (Seliger et al.; col.2, lines 3-7).

As per claim 27, Seliger et al. discloses the study merging method of claim 1, wherein the study identifiers of the first and second medical studies are unique among studies in a database having the distinct database entity (; col. 11, lines 56-67).

As per claim 28, Seliger et al. discloses the computer readable medium of claim 12, wherein the study identifiers of the first and second medical studies are unique among studies in a database having the distinct database entity (; col. 11, lines 56-67).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5,16, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seliger et al. (U.S. Patent No 5,546,580) in view of applicant's admitted prior art (specification; paragraph 0002).

As per claims 5 and 16 Seliger et al. discloses the study merging method of claim 1, wherein the first and second medical studies include unique identifiers according to a lexicon of Digital Imaging and Communication in Medicine (DICOM).

Seliger et al. fails to expressly teach the unique identifiers according to a DICOM standard. However, this feature is well known according to the applicant's background information.

As per paragraph (0002) of applicant's background information, DICOM is a prevailing standard for medical imaging management. Examiner considers that it would be obvious at the time the invention was made to a person having ordinary skill in the art to include DICOM standards into the medical information system of Seliger.

As per claim 25 Seliger et al. discloses a computer-implemented medical study merging method, comprising: Identifying, in accordance with a lexicon of Digital Imaging and Communication in Medicine (DICOM), a patient's related first and second medical studies to be merged (Seliger et al.; col.12, lines 9-12); and merging the first medical study with the second medical study, according to a protocol attribute, (Seliger et al.; col.3, lines 8-18 and lines 20-23) such that a resultant composite study has a study identifier different from at least one of the first and second medical studies (Seliger et al.; col.11, lines 59-65), wherein, in accordance with said lexicon, the merging includes an automatic adding of a series of the second medical study to the composite study (Seliger et al.; col. 5, lines 39-42), the series of the second medical study having a series identifier the same as a pre-merge corresponding series identifier, with the series of the second medical study including at least an artifact with an artifact identifier the same as a pre-merge corresponding artifact identifier, such that the composite study includes series and corresponding series identifiers from both the pre-merged first and second medical studies (Seliger et al.; col. 11, lines 59-65).

The obviousness of modifying the teaching of to include the Identifying, in accordance with a lexicon of Digital Imaging and Communication in Medicine

(DICOM), a patient's related first and second medical studies to be merged (as taught by Applicant's admitted prior art) is as addressed above in the rejection of claim 5-16 above and incorporated herein.

As per claim 26, Seliger et al. discloses the medical study merging method of claim 25, wherein the composite study is assigned a unique study identifier of the first medical study. (Seliger et al.; col. 3, lines 20-23, col. 11, lines 56-67 and col. 12, lines 1-6).

(10) Response to Argument

In the Appeal Brief filed 08/28/2007, Appellant makes the following arguments:

A. Seliger et al. does not teach a computer-implemented study merging method or computer program product in a computer readable medium involving merging a patient's first medical study with a logically related or similar second medical study, to create a composite study.

B. Seliger et al. does not teach reconciling study identifiers of the first and second medical studies, in which the merging includes an automatic adding of medical information, according to a protocol attribute, of the first or second medical study into the other medical study in the creating of the composite study.

C. Seliger et al. does not teach assigning a unique study identifier to the merged study.

D. Paragraph (0002) of the Applicant's specification does not teach a computer-implemented study merging method or computer program product in a

computer readable medium involving merging a patient's first medical study with a logically related or similar second medical study, to create a composite study.

E. Paragraph (0002) of the Applicant's specification does not teach reconciling study identifiers of the first and second medical studies, in which the merging includes an automatic adding of medical information, according to a protocol attribute, of the first or second medical study into the other medical study in the creating of the composite study.

F. Paragraph (0002) of the Applicant's specification does not teach merging the first medical study with the second medical study, according to a protocol attribute, such that a resultant composite study has a study identifier different from at least one of the first and second medical studies, in which, the merging includes an automatic adding of a series of the second medical study to the composite study, the series of the second medical study having a series identifier the same as a pre-merge corresponding series identifier, with the series of the second medical study including at least an artifact with an artifact identifier the same as a pre-merge corresponding artifact identifier, such that the composite study includes series and corresponding series identifiers from both the pre-merged first and second medical studies.

Examiner will address Appellant's arguments in sequence as they appear in the brief.

Argument A:

In response to Appellant's first argument, the Examiner respectfully submits that Appellant's specification paragraph 0011 and also claim 1 recites "merging includes an automatic adding of medical information, according to protocol attribute, of the first or second medical study", Seliger et al. teaches "methods and apparatus for coordinating updates to a

record, such as patient flowsheet, in a medical information system" (Seliger et al.; col. 3, lines 6-8), "the flowsheet provides a concise summary of selected patient information for a given time period" (Seliger et al.; col. 5, lines 16-17, figure 2), and "the correction history provides a permanent record of all changes to the patient flowsheet and can be displayed at a workstation in response to a request by a user"(Seliger et al.; col. 3, lines 52-56). The Appellant states that "study" refers to the collected information for an examination (arguments, page 7), but Examiner respectfully submits that according to the claims and specification, the medical study contains examination results and Seliger et al. teaches "The current flowsheet information must be reflected in each workstation which contains a copy of the patient flowsheet that was updated. Each workstation is notified by the database server that an event has occurred for a particular patient flowsheet. Each workstation containing that patient flowsheet requests the updated information from the server when it is ready to do so. The display screen of each workstation presently displaying the patient flowsheet is updated to reflect the new parameter value or values. The new parameter values are highlighted with a special character, such as an "x" or "!" (Seliger et al.; col. 7, lines 9-19) Therefore more than one patient's measurement can be added, which are considered as a study, and the flowsheet (Seliger et al.; figure 2 and 3) obtained from the measurements at different times and from different locations are considered a composite study, since it is a combined patient measurement information. Appellant states that Seliger et al. teaches entered data value simply replaces the earlier value in the record, Examiner would like to submit that in figure 2, the flowsheet reflects the measured values of the patient, such as heart rate, temperature, etc, are obtained and put altogether in a representation, none of the new values replace any older value. The method and apparatus of Seliger et al. combines the patient's medical measurements, and the correction history (figure 3) informs the user of recent updates to that parameter.

Argument B:

In response to Appellant's second argument, the Examiner respectfully submits that Seliger et al. teaches "The database events for each patient flowsheet are stored in buffers, or queues, on a per workstation basis in the database server 700 ... Each database event includes a sequence number and event information. Database events typically represent new information, or data, for updating the patient flowsheet. The sequence represents the order in which the events were received by the database server, and the event information contains the new data for updating the flowsheet." (Seliger et al.' col. 11, lines 56-67) Sequence numbers are considered as study identifiers, since they represent database events obtained in different times.

Argument C:

In response to Appellant's second argument, the Examiner respectfully submits that Seliger et al. teaches "As a result of processing two or more database events in sequence, the same parameter value may be changed more than once. By adhering to the sequence numbers of the database events, the final parameter value reflects the current value" (Seliger et al.; col. 12, lines 25-29) Examiner considers that adhered sequence numbers would create a unique number.

Arguments D, E and F:

In response to appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

For the claims 5,16, 25 and 26, Examiner used the appellant's admitted prior art described in paragraph 0002. Examiner explained in the previous office actions as well as in this examiner's answer that Seliger et al. fails to teach the unique identifiers according to a DICOM standard,

however Appellant has described in the paragraph 0002 that "Typically, a physician will order or prescribe for a patient certain examinations, such as an X-ray or ultrasound examination. When such an examination is being performed, a user will typically generate a "medical" study which will contain the examination results. The study may be stored according to a DICOM (Digital Imaging and Communication in Medicine) standard, a format for Agilent Technology's medical information management system called EnConcert, known as DSR-TIFF, or as another storage format." Therefore storing a study according to a DICOM standard is well known in the art.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

This examiner's answer contains a new ground of rejection set forth in section **(9)** above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any

amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Dilek B Cobanoglu/

Examiner, Art Unit 3626

11/18/2008

/C Luke Gilligan/

Supervisory Patent Examiner, Art Unit 3626

A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:

Conferees:

/C. G./

C. Luke Gilligan

Supervisory Patent Examiner, Art Unit 3626

Vincent Millin

Appeals Practice Specialis, TC 3600

WYNN W. COGGINS
TECHNOLOGY CENTER DIRECTOR